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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,727	07/31/2003	James Colegrove	921207-96547	2776

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David C. Brezina
BARNES & THORNBURG
P.O. Box 2786
Chicago, IL 60690-2786

EXAMINER	
BELLINGER, JASON R	

ART UNIT	PAPER NUMBER
3617	

DATE MAILED: 02/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/632,727	COLEGROVE, JAMES	
	Examiner	Art Unit	
	Jason R Bellinger	3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 November 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 17-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6, 17-19, 21* is/are rejected.

7)☒ Claim(s) *20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 November 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Drawings

1. The drawings were received on 26 November 2004. These drawings are approved.

2. Figure 8 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> **The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.**

4. Claims 1-6, 19, and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. The term "strong" in claim 1 is a relative term, which renders the claim indefinite. The term "strong" is not defined by the claim, the specification does not provide a

standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. There is no quantification for the strength (tensile, etc) of the second reinforcing fibers.

6. The term "slightly" in claims 2 and 19 is a relative term, which renders the claim indefinite. The term "slightly" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is unclear the extent to which the apexes are radiused, and it is also unclear what dimension the braking surfaces actually are.

7. Claim 21 recites the limitation "the compaction process" in line 6. There is insufficient antecedent basis for this limitation in the claim. There has been no prior recitation of any method steps and/or processes set forth in claim 21 or any proceeding claim from which claim 21 depends.

Claim Rejections - 35 USC § 103

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 1-2 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lew ('313) in view of Sacks and in further view of Lew et al ('839).

Lew ('313 B1) shows a wheel rim 20 formed of a fiber reinforced plastic having a structural portion, and left and right braking surfaces. The rim 20 is formed in a shape having a complex curvature with substantially uniform strength and density. The structural portion is formed predominantly of a high modulus fiber. The ratio of fibers to plastic is substantially above 60%. The rim 20 is formed of substantially identical semicircular halves (11 & 12). The first half 11 includes a male plug 22 at one end and a female receptacle at the opposite end; both ends being separated by an arc portion. The second half 12 has the same configuration as the first half 11. The rim 20 is assembled by matingly interconnecting and adhesively bonding the first plug 22 with the second female receptacle, and the second plug 22 with the first female receptacle.

The rim 20 includes a tire well extending between left and right apexes. The apexes have a radius. The braking surfaces extend downwardly form the apexes. The tire well is smoothly curved to receive a tire. While Lew ('313 B1) does not specify the size tire that may be mounted on the rim, however one of ordinary skill in the art at the time of the invention would find it obvious to mount a tire properly sized to fit on the rim.

Lew ('313 B1) does not specify that the plugs include a tapered neck portion. Sacks teaches the use of plugs (40 & 42) for attaching ends 20 of a rim 12 together, wherein the plugs (40 & 42) include tapered neck portion 44 that function to center the plug with respect to a female receptacle 34, and preserve an adequate adhesive coating. Therefore from this teaching, it would have been obvious to one of ordinary skill

in the art at the time of the invention to provide the plugs of Lew ('313 B1) with tapered neck portions to allow the rim sections to be properly aligned and securely connected.

Lew ('313 B1) as modified by Sacks does not disclose that the high modulus fibers are aligned in laminations formed of a series of 0-45-90 degree alignments. Lew et al teaches the formation of a fiber reinforced plastic rim 10 being formed with the fibers aligned in laminations formed of a series of 0-38-90 degree alignments. However, it is stated that the 38 degree lamination is only preferred, but does not exclude a 45 degree lamination instead. Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the rim of Lew ('313 B1) as modified by Sacks from a series of laminations with fibers in 0-45-90 degree alignments for the purpose of providing a rim capable of withstanding various forces (sheer, tension, compression, etc) experienced during operation.

Lew ('313 B1) as modified by Sacks also does not show the braking surfaces being substantially flat, and joining left and right walls that further join a spoke bed. Lew et al ('839 B1) teaches the use of a rim 10 having substantially flat braking surfaces (30a & 30b) that join right and left walls that further join a spoke bed 32. While, Lew et al does not specify dimensions of the walls of braking surfaces, it would be obvious to one of ordinary skill in the art to form these sections of the rim with dimensions suitable for proper strength and function of the rim. Lew et al also does not specify that the braking surface is formed of a second reinforcing fiber material "more easily machinable" than that of the rest of the rim. However, it would have been obvious to one of ordinary skill

at the time of the invention to form the brake surfaces out of a material capable of being machined for the purpose of allowing the application of a wear resistant material to the brake surfaces, providing an aesthetically pleasing rim surface, etc.

Therefore from these teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the rim of Lew ('313 B1) as modified by Sacks to have the configuration as taught by Lew et al for the purpose of providing more surface area to engage the brakes, thus shortening the stopping distance of the when in use.

10. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lew ('313 B1) in view of Sacks and Lew et al ('839 B1) as applied to claims 1-2 and 18-19 above, and further in view of Chen. Lew as modified by Sacks and Lew et al does not show unidirectional circular reinforcing bundles located between laminations at the apexes and spoke bed of the rim. Chen teaches the use of unidirectional circular reinforcing bundles 321 and 363 located at the apexes and spoke bed, respectively of a rim.

Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide reinforcing bundles at the apexes and spoke bed of the rim of Lew as modified by Sacks and Lew et al for the purpose of providing additional structural reinforcement to the rim to prevent torsional or lateral distortion.

Allowable Subject Matter

11. Claims 3-6 and 20-21 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

12. Applicant's response filed 26 November 2004 have been fully considered, however no discussion of the references applied against the claims, explaining how the claims avoid the references or distinguish from them, was provided.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason R Bellinger whose telephone number is 703-308-6298. The examiner can normally be reached on Mon - Thurs (9:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Morano can be reached on 703-308-0230. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason R Bellinger
Examiner
Art Unit 3617

jrb

S. JOSEPH MORANO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600